

PROFILING DIABETIC OPHTHALMIC COMPLICATIONS WITHIN AN ABORIGINAL POPULATION-BASED COHORT: THE PREDICTING RENAL, OPHTHALMIC AND HEART EVENTS IN THE ABORIGINAL COMMUNITY STUDY (PROPHECY)

Purpose: Substantial research into type-2 diabetes mellitus (T2DM) and diabetic ophthalmic complications exists, despite this, little evidence has been established on why Aboriginal Australians suffer a disproportionate burden of this disease. Psychosocial, biomedical, and socio-environmental determinants of disease are thought to influence the premature and severe progression of diabetic retinopathy (DR) among Aboriginal people, with an imperative to explore such determinants. This study seeks to describe the DR profile of participants within a population-based cohort under development.

Method: The PROPHECY study is establishing a baseline cohort (n=4000) of Aboriginal people, with and without T2DM, living within South Australia.

Characterisation of clinical variation are being achieved through the capture of psychosocial (chronic stress, depression), biomedical (glycated haemoglobin, lipid panels) and socio-environmental (geographical location, financial security) features. DR status is established through a clinical ocular examination including biomicroscopy and retinal imaging (photography/optical coherence tomography).

Results: Preliminary data (n=421, June 17) has seen recruitment of 157 participants (35.0%) with T2DM. The prevalence of any DR, diabetic macula oedema and vision-threatening DR among those with T2DM was 42.9%, 21.4% and 21.7%, respectively. Only 52.2% (n=82) of participants with diabetes have had an eye examination within 12 months as per the recommended NHMRC DR guidelines.

Conclusions: PROPHECY aims to aid our understanding of the natural history, biomedical risk factors and social determinants of diabetes and its complications in Aboriginal people. The cohort will provide a unique opportunity to identify predictors of complications overtime, setting the foundation for integrated epidemiological, biomedical and health service research in relation to DR.